

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims**

Claim 1 (Currently Amended): A carrier having immobilized antigens or antibodies, comprising:

a carrier having a surface, in which at least the surface of the carrier is formed of a calcium phosphate based compound; ~~and~~

antiligands provided on and surrounding the surface of the carrier;

a blocking layer formed of a protein having low interaction with antigens or antibodies, the blocking layer being formed on a portion of the surface of the carrier where the antiligands are not provided; and

antigens or antibodies each having a portion that is irrelevant to the antigen-antibody reaction on which a ligand is provided, ~~each of~~ said antigens or antibodies being immobilized to the surface of the carrier through ~~the~~ bonding between the ligands and the antiligands with the blocking layer effectively preventing antigens or antibodies from being directly absorbed to the surface without bonding between the ligands and the antiligands irrelevant portion thereof,

~~wherein the surface of the carrier has a portion where the antigens or antibodies are not immobilized, and at least a part of the portion of the surface is coated with a protein having low interaction with antigens or antibodies.~~

Claim 2 (Currently Amended): The carrier having immobilized antigens or antibodies as claimed in claim 1, wherein the carrier ~~carries antiligands thereon and each antigen or antibody has a ligand bonded thereto, in which each antigen or antibody is immobilized to the carrier through the ligand and the antiligand~~ has a substantially spherical shape.

Claim 3 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 2, wherein each antiligand is carried by the surface of the carrier by adsorption.

Claim 4 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 2, wherein each antibody has a constant region, and the ligand is bonded to the constant region of the antibody.

Claim 5 (Currently Amended): The carrier having immobilized antigens or antibodies as claimed in claim 1, wherein the coating of the protein is made by adsorption of the ~~carrier~~ protein to ~~the part of~~ the portion of the surface.

Claim 6 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 1, wherein the protein is casein.

Claim 7 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 1, wherein the antigens or antibodies are stabilized.

Claim 8 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 7, wherein the antigens or antibodies are stabilized by treating the carrier with a stabilizing agent.

Claim 9 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 7, wherein the antigens or antibodies are stabilized by treating the carrier with a cross-linking agent which cross-links the antigens or antibodies and the ligands and/or antiligands.

Claim 10 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 9, wherein the cross-linking agent is a bivalent cross-linking agent.

Claim 11 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 1, wherein a portion of the carrier which is in the vicinity of the surface thereof is formed into a dense structure.

Claim 12 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 1, wherein the carrier includes a carrier body having a surface thereof, and a coating made of a calcium phosphate based compound and provided on the surface of the carrier body.

Claim 13 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 12, wherein the carrier is produced by colliding porous particles of the calcium phosphate based compound to the carrier body.

Claim 14 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 13, wherein the porous particles are produced by agglutination bonding of primary particles of the calcium phosphate based compound.

Claim 15 (Previously Presented): The carrier having immobilized antigens or antibodies as claimed in claim 1, wherein the antibodies are IgG.

Claim 16 (Withdrawn – Currently Amended): A method of manufacturing a carrier having immobilized antigens or antibodies according to claim 1, the method comprising ~~the steps of:~~

providing the antiligands on and surrounding the surface of the carrier;

forming the blocking layer of a protein having low interaction with antigens or antibodies on the portion of the surface of the carrier where the antiligands are not provided;

~~an immobilizing step for immobilizing the antigens or antibodies each having a portion that is irrelevant to the antigen-antibody reaction to a the surface of a the carrier which is formed of a calcium phosphate based compound through portions of the antigens or antibodies that are irrelevant to the antigen-antibody reaction bonding between the ligands and the antiligands, and~~

~~a coating step for coating at least a part of a portion of the surface of the carrier, where the antigens or antibodies are not immobilized, with a protein having low interaction with antigens or antibodies.~~

Claim 17 (Withdrawn – Currently Amended): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 16, wherein ~~the immobilizing step includes:~~

~~a step of letting antiligands to be carried on the surface of the carrier; and~~

~~a step of contacting antigens or antibodies to which ligands having affinity to the antiligands are bonded, to the carrier has a substantially spherical shape.~~

Claim 18 (Withdrawn – Currently Amended): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 17, wherein the antiligands are ~~carried on the carrier by being~~ adsorbed by the surface of the carrier.

Claim 19 (Withdrawn): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 17, wherein the ligands are bonded to constant regions of the antibodies.

Claim 20 (Withdrawn – Currently Amended): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 16, wherein the ~~coating step is carried out by~~ forming the coating layer comprises letting the protein to be adsorbed to the part of the portion of the surface of the carrier.

Claim 21 (Withdrawn): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 16, wherein the protein is casein.

Claim 22 (Withdrawn – Currently Amended): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 16, wherein the method further comprises, after the immobilizing ~~step~~, ~~a step of~~ stabilizing the antigens or antibodies.

Claim 23 (Withdrawn – Currently Amended): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 22, wherein the stabilizing ~~step~~ is carried out by treating the carrier with a stabilizing agent.

Claim 24 (Withdrawn – Currently Amended): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 22, wherein the stabilizing ~~step~~ is carried out by treating the carrier with a cross-linking agent for bonding the antigens or antibodies to the ligands and/or antiligands.

Claim 25 (Withdrawn): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 24, wherein the cross-linking agent is a bivalent cross-linking agent.

Claim 26 (Withdrawn): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 16, wherein a portion of the carrier which is in the vicinity of the surface thereof is formed into a dense structure.

Claim 27 (Withdrawn): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 16, wherein the carrier includes a carrier body having a surface thereof, and a coating made of a calcium phosphate based compound and provided on the surface of the carrier body.

Claim 28 (Withdrawn): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 27, wherein the carrier is produced by colliding porous particles of the calcium phosphate based compound to the carrier body.

Claim 29 (Withdrawn): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 28, wherein the porous particles are produced by agglutination bonding of primary particles of the calcium phosphate based compound.

Claim 30 (Withdrawn): The method of manufacturing a carrier having immobilized antigens or antibodies as claimed in claim 16, wherein the antibodies are IgG.

Claim 31 (New): A carrier having immobilized antigens or antibodies, comprising:  
a carrier having a surface which is formed of a calcium phosphate based compound;  
antigens or antibodies each having a portion that is irrelevant to the antigen-antibody  
reaction, each of said antigens or antibodies being immobilized to the surface of the carrier through  
the irrelevant portion thereof; and

the surface of the carrier having a portion where the antigens or antibodies are not  
immobilized, and at least a part of the portion of the surface is coated with a protein having low  
interaction with antigens or antibodies, in which the protein is comprised of a protein having a  
metallic ion which has been subjected to a treatment for removing or reducing the metallic ion.

Claim 32 (New): The carrier having immobilized antigens or antibodies as claimed in  
claim 31, wherein the carrier has a substantially spherical shape.